Attorney Docket No. 9286.7 Application Serial No.: 10/019,902

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## IN THE CLAIMS

Please amend the claims as follows. The following listing of claims replaces all prior versions.

- 1-5. (canceled).
- (currently amended) A compound of the general formula (I)
   X(B)<sub>m</sub> (I)

wherein

- X is C or CHan m valent unit and
- B are identical or different and denote K-R, wherein
  - K is a bond or is  $A^1-(A^2-A^3)_k$ -sp, wherein
    - $A^1$  is  $(CH_2)_t Y (CH_2)_u$ , wherein
    - Y is >C=O, >NH, -O-, -S- or a bond,
    - t is an integer from 0 to 6 and
    - u is an integer from 0 to 6,

(A<sup>2</sup>-A<sup>3</sup>) can be any A<sup>2</sup> and any A<sup>3</sup> in any combination,

- $A^2$  is -NHCO- or -CONH-,
- $A^3$  is  $(CH_2)_r$ ,  $O(CH_2)_r$ , or  $S(CH_2)_r$ , wherein
  - r = 1
  - sp is a divalent spacer or a bond, and
  - k is an integer from 5 to 100, and
- R is hydrogen, sialic acid, sialyl lactose, sialyl lactosamine, lactose, mannose, Galα1-3Gal, Galα1-3(Fucα1-2)Gal, GalNAcα1-3(Fucα1-2)Gal, Neu5Acα2-6GalNAc, SiaLe<sup>A</sup>, SiaLe<sup>X</sup>, HSO<sub>3</sub>Le<sup>A</sup>, HSO<sub>3</sub>Le<sup>X</sup>, Galα1-3Galβ1-4GlcNAc, Galα1-3Galβ1-4GlcNAc, Neu5Acα2-6Galβ1-4GlcNAc, HSO<sub>3</sub>GlcAβ1-3Galβ1-4GlcNAc, N-acetyl-lactosamine or polylactosamine, sialic acid benzyl glycoside, HSO<sub>3</sub>GlcAβ1-3Gal, HSO<sub>3</sub>GlcAβ1-3Galβ1-4GlcNAcβ1-3Galβ1-4Glc, GalNAcα, GalNAcα1-3(Fucα1-2)Galβ1-4GlcNAc, Galα1-3(Fucα1-2)Galβ1-4GlcNAc, HSO<sub>3</sub>(Sia)Le<sup>X</sup>, HSO<sub>3</sub>(Sia)Le<sup>A</sup>, Le<sup>Y</sup>, GlcNAcβ1-6(GlcNAcβ1-3)Galβ1-4GlcNAc, HSO<sub>3</sub>(Sia)Le<sup>X</sup>, HSO<sub>3</sub>(Sia)Le<sup>A</sup>, Le<sup>Y</sup>, GlcNAcβ1-6(GlcNAcβ1-3)Galβ1-

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4Glc, GalNAcβ1-4(Neu5Acα2-3)Galβ1-4Glc, mannose-6-phosphate, GalNAcβ1-4GlcNAc, oligo-sialic acid, N-glycolylneuraminic acid, Galα1-4Galβ1-4Glc, or Galα1-4Galβ1-4GlcNAc; and

m is at least 2,

with the proviso that

- (1) in the compound at least three R are not hydrogen,
- (2) there are at least two K that are not a bond, and
- (3) X, B and m are so selected that an intermolecular association of the K in liquid phase by the formation of hydrogen bonds is possible, with formation of aggregates that present on the surface a plurality of R that are not hydrogen, and
  - (4) the molar mass of the fragment  $X(K)_m$  is less than 20,000.
  - 7-8. (canceled).
  - 9. (previously presented) A compound of the general formula (I)

$$X(B)_m$$

 $(\mathfrak{D})$ 

wherein

X is CH<sub>4-m</sub> and

B are identical or different and denote K-R, wherein

K is a bond or is  $A^1-(A^2-A^3)_k$ -sp, wherein

A<sup>1</sup> CH<sub>2</sub>, wherein

Y is >C=O, >NH, -O-, -S- or a bond,

t is an integer from 0 to 6 and

u is an integer from 0 to 6,

 $(A^2-A^3)$  can be any  $A^2$  and any  $A^3$  in any combination,

 $A^2$  is NHCO,

A<sup>3</sup> is CH<sub>2</sub>, wherein

r = 1,

sp is (CH<sub>2</sub>)<sub>3</sub>CONHCH<sub>2</sub>CONHC<sub>6</sub>H<sub>4</sub>-4-CH<sub>2</sub>O-, and

k is 8, and

R is Neu5Aco2-6Galβ1-4GlcNAc; and

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m is an integer from 2 to 4, with the proviso that

- (1) in the compound at least one R is not hydrogen,
- (2) there are at least two K that are not a bond, and
- (3) X, B and m are so selected that an intermolecular association of the K in liquid phase by the formation of hydrogen bonds is possible, with formation of aggregates that present on the surface a plurality of R that are not hydrogen, and
- (4) the molar mass of the fragment  $X(K)_m$  is less than 20,000.
  - 10. (currently amended) An aggregate of the general formula (II):

$$\{X(B)_m\}_n$$

(II)

wherein X(B)<sub>m</sub> may be identical or different and denote a compound of the general formula (I),

$$X(B)_m$$

(I)

wherein

- X is C or CHan m-valent unit and
- B are identical or different and denote K-R, wherein

K is a bond or is  $A^1-(A^2-A^3)_k$ -sp, wherein

$$A^1$$
 is  $(CH_2)_tY(CH_2)_u$ , wherein

t is an integer from 0 to 6 and

u is an integer from 0 to 6,

(A<sup>2</sup>-A<sup>3</sup>) can be any A<sup>2</sup> and any A<sup>3</sup> in any combination,

$$r = 1$$
,

sp is a divalent spacer or a bond, and

k is an integer from 5 to 100, and

R is hydrogen, sialic acid, sialyl lactose, sialyl lactosamine, lactose, mannose, Galα1-3Gal, Galα1-3(Fucα1-2)Gal, GalNAcα1-3(Fucα1-2)Gal, Neu5Acα2-6GalNAc, SiaLe<sup>A</sup>, SiaLe<sup>X</sup>, HSO<sub>3</sub>Le<sup>A</sup>, HSO<sub>3</sub>Le<sup>X</sup>, Galα1-3Galβ1-4GlcNAc, Galα1-3Galβ1-4Glc,

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Neu5Acα2-6Galβ1-4GlcNAc, HSO3GlcAβ1-3Galβ1-4GlcNAc, N-acetyl-lactosamine or polylactosamine, sialic acid benzyl glycoside, HSO<sub>3</sub>GlcAβ1-3Gal, HSO<sub>3</sub>GlcAβ1-3Galβ1-4GlcNAcβ1-3Galβ1-4Glc, GalNAcα, GalNAcα1-3(Fucα1-2)Galβ1-4GlcNAc, Galα1- $3(Fuc\alpha 1-2)Gal\beta 1-4GlcNAc$ ,  $HSO_3(Sia)Le^X$ ,  $HSO_3(Sia)Le^A$ ,  $Le^Y$ ,  $GlcNAc\beta 1-6(GlcNAc\beta 1-6)GlcNAc\beta 1-6(GlcNAc\beta 1-6)GlcNAc\beta 1-6(GlcNAc\beta 1-6)GlcNAc\beta 1-6(GlcNAc\beta 1-6)GlcNAcβ 1-6(GlcNAcβ 1-6)Glc$ 3)Gal\u00e41-4Glc, Gal\u00abAc\u00b41-4(\u00bac\u00ab2-3)Gal\u00ab1-4Glc, mannose-6-phosphate, Gal\u00bac\u00b41-4GlcNAc, oligo-sialic acid, N-glycolylneuraminic acid, Galα1-4Galβ1-4Glc, or Galα1-4Galß1-4GlcNAc; and

is 3 or 4, m

with the proviso that

- in the compound at least one R isthree R are not hydrogen, (1)
- there are at least two K that are not a bond, and (2)
- X, B and m are so selected that an intermolecular association of the K in liquid phase by the (3) formation of hydrogen bonds is possible, with formation of aggregates that present on the surface a plurality of R that are not hydrogen, and
- (4) the molar mass of the fragment  $X(K)_m$  is less than 20,000, and n is from 2 to 100,000,

and wherein  $X(B)_m$  are non-covalently bonded.

- 11. (previously presented) An aggregate according to claim 10 having a leaf-like, linear, cyclic, polycyclic, polyhedral, spherical or dendritic structure.
- 12. (currently amended) An aggregate according to claim 10 of two or more different compounds comprising a compound of the general formula (I)

$$X(B)_m$$
 (1)

wherein

- is C or CHan-m-valent unit and X
- are identical or different and denote K-R, wherein В

is a bond or is  $A^1-(A^2-A^3)_k$ -sp, wherein K

> $A^{1}$ is (CH<sub>2</sub>)<sub>t</sub>Y(CH<sub>2</sub>)<sub>u</sub>, wherein

is >C=O, >NH, -O-, -S- or a bond, Y

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t is an integer from 0 to 6 and

u is an integer from 0 to 6,

(A<sup>2</sup>-A<sup>3</sup>) can be any A<sup>2</sup> and any A<sup>3</sup> in any combination,

 $A^2$  is -NHCO- or -CONH-,

 $A^3$  is  $(CH_2)_r$ ,  $O(CH_2)_r$ , or  $S(CH_2)_r$ , wherein

r = 1

sp is a divalent spacer or a bond, and

k is an integer from 5 to 100, and

R is hydrogen, sialic acid, sialyl lactose, sialyl lactosamine, lactose, mannose, Galα1-3Gal, Galα1-3(Fucα1-2)Gal, GalNAcα1-3(Fucα1-2)Gal, Neu5Acα2-6GalNAc, SiaLe<sup>A</sup>, SiaLe<sup>X</sup>, HSO<sub>3</sub>Le<sup>A</sup>, HSO<sub>3</sub>Le<sup>X</sup>, Galα1-3Galβ1-4GlcNAc, Galα1-3Galβ1-4Glc, Neu5Acα2-6Galβ1-4GlcNAc, HSO<sub>3</sub>GlcAβ1-3Galβ1-4GlcNAc, N-acetyl-lactosamine or polylactosamine, sialic acid benzyl glycoside, HSO<sub>3</sub>GlcAβ1-3Gal, HSO<sub>3</sub>GlcAβ1-3Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcα, GalNAcα, GalNAcα1-3(Fucα1-2)Galβ1-4GlcNAc, Galα1-3(Fucα1-2)Galβ1-4GlcNAc, HSO<sub>3</sub>(Sia)Le<sup>X</sup>, HSO<sub>3</sub>(Sia)Le<sup>A</sup>, Le<sup>Y</sup>, GlcNAcβ1-6(GlcNAcβ1-3)Galβ1-4Glc, GalNAcβ1-4(Neu5Acα2-3)Galβ1-4Glc, mannose-6-phosphate, GalNAcβ1-4GlcNAc, oligo-sialic acid, N-glycolylneuraminic acid, Galα1-4Galβ1-4Glc, or Galα1-4Galβ1-4GlcNAc; and

m is 3 or 4.

with the proviso that

- (1) in the compound at least one R is three R are not hydrogen,
- (2) there are at least two K that are not a bond, and
- (3) X, B and m are so selected that an intermolecular association of the K in liquid phase by the formation of hydrogen bonds is possible, with formation of aggregates that present on the surface a plurality of R that are not hydrogen, and
- (4) the molar mass of the fragment  $X(K)_m$  is less than 20,000.
  - 13. (canceled).

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- 14. (previously presented) A method according to claim 27, further comprising adding a concentrated salt solution, changing the pH or the temperature, or adding organic solvents.
- 15. (currently amended) A method for changing the structure of an aggregate of the general formula (II)

MBS&S

$$\{X(B)_m\}_n \tag{II}$$

wherein X(B)<sub>m</sub> may be identical or different and denote a compound of the general formula (I),

$$X(B)_m$$
 (I)

wherein

X is C or CHan m valent unit and

B are identical or different and denote K-R, wherein

K is a bond or is  $A^1-(A^2-A^3)_k$ -sp, wherein

 $A^1$  is  $(CH_2)_t Y (CH_2)_u$ , wherein

Y is >C=O, >NH, -O-, -S- or a bond,

t is an integer from 0 to 6 and

u is an integer from 0 to 6,

(A<sup>2</sup>-A<sup>3</sup>) can be any A<sup>2</sup> and any A<sup>3</sup> in any combination,

 $A^2$  is -NHCO- or -CONH-,

 $A^3$  is  $(CH_2)_r$ ,  $O(CH_2)_r$ , or  $S(CH_2)_r$ , wherein

r = 1

sp is a divalent spacer or a bond, and

k is an integer from 5 to 100, and

R is hydrogen, sialic acid, sialyl lactose, sialyl lactosamine, lactose, mannose, Galα1-3Gal, Galα1-3(Fucα1-2)Gal, GalNAcα1-3(Fucα1-2)Gal, Neu5Acα2-6GalNAc, SiaLe<sup>A</sup>, SiaLe<sup>X</sup>, HSO<sub>3</sub>Le<sup>A</sup>, HSO<sub>3</sub>Le<sup>X</sup>, Galα1-3Galβ1-4GlcNAc, Galα1-3Galβ1-4Glc, Neu5Acα2-6Galβ1-4GlcNAc, HSO<sub>3</sub>GlcAβ1-3Galβ1-4GlcNAc, N-acetyl-lactosamine or polylactosamine, sialic acid benzyl glycoside, HSO<sub>3</sub>GlcAβ1-3Gal, HSO<sub>3</sub>GlcAβ1-3Galβ1-4GlcNAc, Galα1-4GlcNAcβ1-3Galβ1-4Glc, GalNAcα, GalNAcα1-3(Fucα1-2)Galβ1-4GlcNAc, Galα1-3(Fucα1-2)Galβ1-4GlcNAc, HSO<sub>3</sub>(Sia)Le<sup>X</sup>, HSO<sub>3</sub>(Sia)Le<sup>A</sup>, Le<sup>Y</sup>, GlcNAcβ1-6(GlcNAcβ1-3)Galβ1-4Glc, GalNAcβ1-4(Neu5Acα2-3)Galβ1-4Glc, mannose-6-phosphate, GalNAcβ1-4Glc, GalNAcβ1-4(Neu5Acα2-3)Galβ1-4Glc, mannose-6-phosphate, Gal

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4GlcNAc, oligo-sialic acid, N-glycolylneuraminic acid, Galα1-4Galβ1-4Glc, or Galα1-4Galβ1-4GlcNAc; and

m is 3 or 4,

with the proviso that

- (1) in the compound at least one R is three R are not hydrogen,
- (2) there are at least two K that are not a bond, and
- (3) X, B and m are so selected that an intermolecular association of the K in liquid phase by the formation of hydrogen bonds is possible, with formation of aggregates that present on the surface a plurality of R that are not hydrogen, and
- (4) the molar mass of the fragment X(K)<sub>m</sub> is less than 20,000, and
- n is from 2 to 100,000,

and wherein X(B)<sub>m</sub> are non-covalently bonded,

further comprising adding a concentrated salt solution, changing the temperature or the pH and/or adding urea, trifluoroethanol or peptides.

- 16. (previously presented) A method according to claim 27 further comprising increasing the specific physiological activities of molecules by incorporating a radical R into a compound of the general formula (I).
  - 17. (canceled).
- 18. (currently amended) A method of treating diseases arising from inflammation, viral and bacterial infections, influenza viruses, selectin-mediated inflammatory processes, tumour metastases, or in the neutralisation of antibodies in autoimmune disorders and transplants; said method comprising administering a compound of the general formula (I)

$$X(B)_{m}$$
 (I)

wherein

- X is C or CHan m valent unit and
- B are identical or different and denote K-R, wherein

K is a bond or is  $A^1-(A^2-A^3)_k$ -sp, wherein

 $A^{l}$  is  $(CH_2)_t Y (CH_2)_u$ , wherein

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Y is 
$$>C=0$$
,  $>NH$ ,  $-O-$ ,  $-S-$  or a bond,

t is an integer from 0 to 6 and

u is an integer from 0 to 6,

(A<sup>2</sup>-A<sup>3</sup>) can be any A<sup>2</sup> and any A<sup>3</sup> in any combination,

A<sup>2</sup> is -NHCO-or -CONH-,

A<sup>3</sup> is (CH<sub>2</sub>)<sub>r</sub>, O(CH<sub>2</sub>)<sub>r</sub>, or S(CH<sub>2</sub>)<sub>r</sub>, wherein

r = 1

sp is a divalent spacer or a bond, and

k is an integer from 5 to 100, and

R is hydrogen, sialic acid, sialyl lactose, sialyl lactosamine, lactose, mannose, Galα1-3Gal, Galα1-3(Fucα1-2)Gal, GalNAcα1-3(Fucα1-2)Gal, Neu5Acα2-6GalNAc, SiaLe<sup>A</sup>, SiaLe<sup>A</sup>, HSO3Le<sup>A</sup>, HSO3Le<sup>A</sup>, Galα1-3Galβ1-4GlcNAc, Galα1-3Galβ1-4Glc, Neu5Acα2-6Galβ1-4GlcNAc, HSO3GlcAβ1-3Galβ1-4GlcNAc, N-acetyl-lactosamine or polylactosamine, sialic acid benzyl glycoside, HSO3GlcAβ1-3Gal, HSO3GlcAβ1-3Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ1-3(Fucα1-2)Galβ1-4GlcNAcβ1-4GlcNAcβ1-3(Fucα1-2)Galβ1-4GlcNAcβ1-4GlcNAcβ1-4GlcNAcβ1-4GlcNAcβ1-4GlcNAcβ1-4GlcNAcβ1-4GlcNAcβ1-4GlcNAcβ1-4Glc, GalNAcβ1-4(Neu5Acα2-3)Galβ1-4Glc, mannose-6-phosphate, GalNAcβ1-4GlcNAc, oligo-sialic acid, N-glycolylneuraminic acid, Galα1-4Galβ1-4Glc, or Galα1-4Galβ1-4GlcNAc; and

m is 3 or 4,

with the proviso that

- (1) in the compound at least one R isthree R are not hydrogen,
- (2) there are at least two K that are not a bond, and
- (3) X, B and m are so selected that an intermolecular association of the K in liquid phase by the formation of hydrogen bonds is possible, with formation of aggregates that present on the surface a plurality of R that are not hydrogen, and
- (4) the molar mass of the fragment X(K)<sub>m</sub> is less than 20,000; or administering into an aggregate of the general formula (II)

 $\{X(B)_m\}_n \tag{II}$ 

wherein

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X(B)<sub>m</sub> may be identical or different and denote a compound of the general formula (I), and

is from 2 to 100,000,

and wherein X(B)<sub>m</sub> are non-covalently bonded.

- 19. (canceled).
- 20. (previously presented) A method according to claim 18 further comprising preparing functionalized molecular surfaces.
  - 21-22. (canceled).
  - 23. (currently amended) A compound of the general formula (I),

$$X(B)_{m}$$

**(I)** 

wherein

- X is C or CHan m-valent unit and
- B are identical or different and denote K-R, wherein

K is a bond or is 
$$A^1-(A^2-A^3)_k$$
-sp, wherein

Y is 
$$>C=0$$
,  $>NH$ ,  $-O-$ ,  $-S-$  or a bond,

t is an integer from 0 to 6 and

u is an integer from 0 to 6,

 $(A^2-A^3)$  can be any  $A^2$  and any  $A^3$  in any combination,

$$A^2$$
 is  $-NHCO-$  or  $-CONH-$ ,

sp is a divalent spacer or a bond, and

k is an integer from 5 to 100, and

R is hydrogen, sialic acid, sialyl lactose, sialyl lactosamine, lactose, mannose, Galα1-3Gal, Galα1-3(Fucα1-2)Gal, GalNAcα1-3(Fucα1-2)Gal, Neu5Acα2-6GalNAc, SiaLe<sup>A</sup>, SiaLe<sup>X</sup>, HSO<sub>3</sub>Le<sup>X</sup>, HSO<sub>3</sub>Le<sup>X</sup>, Galα1-3Galβ1-4GlcNAc, Galα1-3Galβ1-4Glc,

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Neu5Acα2-6Galβ1-4GlcNAc, HSO<sub>3</sub>GlcAβ1-3Galβ1-4GlcNAc, N-acetyl-lactosamine or polylactosamine, sialic acid benzyl glycoside, HSO<sub>3</sub>GlcAβ1-3Gal, HSO<sub>3</sub>GlcAβ1-3Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcα, GalNAcα1-3(Fucα1-2)Galβ1-4GlcNAc, Galα1-3(Fucα1-2)Galβ1-4GlcNAc, HSO<sub>3</sub>(Sia)Le<sup>X</sup>, HSO<sub>3</sub>(Sia)Le<sup>A</sup>, Le<sup>Y</sup>, GlcNAcβ1-6(GlcNAcβ1-3)Galβ1-4Glc, GalNAcβ1-4(Neu5Acα2-3)Galβ1-4Glc, mannose-6-phosphate, GalNAcβ1-4GlcNAc, oligo-sialic acid, N-glycolylneuraminic acid, Galα1-4Galβ1-4Glc, or Galα1-4Galβ1-4GlcNAc; and

m is 3 or 4,

with the proviso that

- (1) in the compound at least three R are not hydrogen,
- (1)(2) X, B and m are so selected that an intermolecular association of the K in liquid phase is possible, especially under aqueous conditions, by the formation of hydrogen bonds, with formation of aggregates, and
- (2)(3) the molar mass of the fragment  $X(K)_m$  is less than 20,000, especially less than 4000.

24-26. (canceled).

27. (currently amended) A method of preparing an aggregate comprising: preparing a compound of the general formula (II)

$$\{X(B)_m\}_n \tag{II}$$

wherein

X(B)<sub>m</sub> may be identical or different and denote a compound of the general formula (I),

$$X(B)_m$$
 (I)

wherein

X is C or CHan m valent unit and

B are identical or different and denote K-R, wherein

K is a bond or is  $A^1-(A^2-A^3)_k$ -sp, wherein

 $A^1$  is  $(CH_2)_t Y (CH_2)_u$ , wherein

Y is >C=O, >NH, -O-, -S- or a bond,

is an integer from 0 to 6 and

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u is an integer from 0 to 6,

(A<sup>2</sup>-A<sup>3</sup>) can be any A<sup>2</sup> and any A<sup>3</sup> in any combination,

A<sup>2</sup> is -NHCO-or -CONH-,

A<sup>3</sup> is (CH<sub>2</sub>)<sub>r</sub>, O(CH<sub>2</sub>)<sub>r</sub>, or S(CH<sub>2</sub>)<sub>r</sub>, wherein

r = 1,

sp is a divalent spacer or a bond, and

k is an integer from 5 to 100, and

R is hydrogen, sialic acid, sialyl lactose, sialyl lactosamine, lactose, mannose, Galα1-3Gal, Galα1-3(Fucα1-2)Gal, GalNAcα1-3(Fucα1-2)Gal, Neu5Acα2-6GalNAc, SiaLe<sup>A</sup>, SiaLe<sup>X</sup>, HSO<sub>3</sub>Le<sup>A</sup>, HSO<sub>3</sub>Le<sup>X</sup>, Galα1-3Galβ1-4GlcNAc, Galα1-3Galβ1-4Glc, Neu5Acα2-6Galβ1-4GlcNAc, HSO<sub>3</sub>GlcAβ1-3Galβ1-4GlcNAc, N-acetyl-lactosamine or polylactosamine, sialic acid benzyl glycoside, HSO<sub>3</sub>GlcAβ1-3Gal, HSO<sub>3</sub>GlcAβ1-3Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ1-3(Fucα1-2)Galβ1-4GlcNAcβ1-6(GlcNAcβ1-3(Fucα1-2)Galβ1-4GlcNAcβ1-6(GlcNAcβ1-3)Galβ1-4Glc, GalNAcβ1-4(Neu5Acα2-3)Galβ1-4Glc, mannose-6-phosphate, GalNAcβ1-4GlcNAc, oligo-sialic acid, N-glycolylneuraminic acid, Galα1-4Galβ1-4Glc, or Galα1-4Galβ1-4GlcNAc; and

m is 3 or 4,

with the proviso that

- (1) in the compound at least three R are ene R is not hydrogen,
- (2) there are at least two K that are not a bond, and
- (3) X, B and m are so selected that an intermolecular association of the K in liquid phase by the formation of hydrogen bonds is possible, with formation of aggregates that present on the surface a plurality of R that are not hydrogen, and
- the molar mass of the fragment X(K)<sub>m</sub> is less than 20,000, and is from 2 to 100,000,

and wherein  $X(B)_m$  are non-covalently bonded.

28. (currently amended) A method of preparing a therapeutic drug comprising: preparing the compound of the general formula (I)

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 $X(B)_{m}$ 

**(I)** 

wherein

X is C or CHan m valent unit and

B are identical or different and denote K-R, wherein

K is a bond or is  $A^1-(A^2-A^3)_k$ -sp, wherein

 $A^1$  is  $(CH_2)_t Y (CH_2)_u$ , wherein

Y is >C=O, >NH, -O-, -S- or a bond,

t is an integer from 0 to 6 and

u is an integer from 0 to 6,

(A<sup>2</sup>-A<sup>3</sup>) can be any A<sup>2</sup> and any A<sup>3</sup> in any combination,

 $A^2$  is -NHCO- or -CONH-.

 $A^3$  is  $(CH_2)_r$ ,  $O(CH_2)_r$ , or  $S(CH_2)_r$ , wherein

r = 1,

sp is a divalent spacer or a bond, and

k is an integer from 5 to 100, and

R is hydrogen, sialic acid, sialyl lactose, sialyl lactosamine, lactose, mannose, Galα1-3Gal, Galα1-3(Fucα1-2)Gal, GalNAcα1-3(Fucα1-2)Gal, Neu5Acα2-6GalNAc, SiaLe<sup>A</sup>, SiaLe<sup>X</sup>, HSO<sub>3</sub>Le<sup>A</sup>, HSO<sub>3</sub>Le<sup>X</sup>, Galα1-3Galβ1-4GlcNAc, Galα1-3Galβ1-4Glc, Neu5Acα2-6Galβ1-4GlcNAc, HSO<sub>3</sub>GlcAβ1-3Galβ1-4GlcNAc, N-acetyl-lactosamine or polylactosamine, sialic acid benzyl glycoside, HSO<sub>3</sub>GlcAβ1-3Gal, HSO<sub>3</sub>GlcAβ1-3Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ1-4GlcNAcβ1-4GlcNAcβ1-4GlcNAcβ1-4GlcNAcβ1-4GlcNAcβ1-4GlcNAcβ1-4GlcNAcβ1-4GlcNAcβ1-4Glc, GalNAcβ1-4(Neu5Acα2-3)Galβ1-4Glc, mannose-6-phosphate, GalNAcβ1-4GlcNAc, oligo-sialic acid, N-glycolylneuraminic acid, Galα1-4Galβ1-4Glc, or Galα1-4Galβ1-4GlcNAc; and

m is 3 or 4,

with the proviso that

- (1) in the compound at least three R are one R is not hydrogen,
- (2) there are at least two K that are not a bond, and

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- (3) X, B and m are so selected that an intermolecular association of the K in liquid phase by the formation of hydrogen bonds is possible, with formation of aggregates that present on the surface a plurality of R that are not hydrogen, and
- (4) the molar mass of the fragment X(K)<sub>m</sub> is less than 20,000; or preparing the compound of the general formula (II):

 ${X(B)_m}_n$  (II)

wherein

X(B)<sub>m</sub> may be identical or different and denote a compound of the general formula (I), and n is from 2 to 100,000,

and wherein  $X(B)_m$  are non-covalently bonded; and a pharmaceutically acceptable carrier.

29. (canceled).